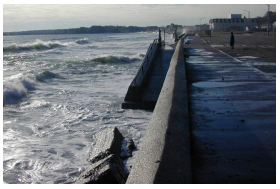
Ocean and Coastal Ecosystem Health Committee
2013-2014 Work Plan



The Ocean and Coastal Ecosystem Health (OCEH) Committee is one of three Northeast Regional Ocean Council (NROC) standing committees. This committee was established to help identify and coordinate regional activities to preserve and restore ecosystem health in New England. As recommended in the National Ocean Council's (NOC) *Draft National Ocean Policy Implementation Plan*, ecosystem health and the ability to sustain those services derived from healthy coastal ecosystems will rely heavily on an ecosystem-based management (EBM) approach. In an EBM context, NROC and the OCEH Committee believe that we have the best prospects for integrating management efforts that crosscut most if not all of the most pressing issues related to ocean and coastal ecosystem health. Further, an EBM framework automatically incorporates other national priority objectives for supporting data and science, spatial characterizations, and program integration that will foster better decisions and management that can help achieve the overarching goal of healthy ecosystems.

Over the past year, NROC has been working with the Northeast Regional Association of Coastal and Ocean Observing Systems (NERACOOS) to merge their respective ecosystem health committees into a single committee that will advise both organizations and identify joint priorities for their respective work plans. This work plan represents the first effort of the combined programs, but it is acknowledged that full integration must engage many other programs, including those that offer social and economic expertise to support EBM decisions along with the scientific and management expertise the OCEH committee presently comprises. This is essential, especially for developing a regional monitoring network that will fuel an effective EBM approach and the indicators that are derived from monitoring data that will guide and chart their progress.

Goal: Enhance region-wide coordination and collaborative actions on shared ocean and coastal ecosystem health priorities including those affecting water quality, habitats, and living resources and their derived social and economic benefits.

Need for Action: The Northeastern U.S. coastal ocean is a rich and diverse place, from the near-shore sounds of southern New England to the beaches of Cape Cod, and the rocky shores and complex circulatory patterns of the Gulf of Maine.

These ecosystems have abundant resources and have supported coastal communities for generations. But these valuable ecosystems are vulnerable. The impacts of increasing human uses, including many new industrial uses, and the effects of fragmented, single-sector management are showing in degraded water quality, depleted fish stocks, and damaged habitat that have diminished our lifestyle and economy alike. These effects are widespread, often linked to common causes, as evidenced by documented "dead zones" in Long Island Sound, shifting and unbalanced natural communities from changing climate and invasive species, and diminished fisheries in the Gulf of Maine. The New England states also have identified causal links to human activity such as development on land and use of fossil fuels with the health of our coastal waters and estuaries.

Many people, agencies, and organizations are already working to protect and restore coastal and ocean ecosystem health in the Northeastern U.S.. NROC's role is to support the NOC's draft Implementation Plan, guided by the four themes of 1) adopting EBM; 2) obtaining, using

and sharing the best science and data; 3) promoting efficiency and collaboration; and 4) strengthening our regional effort. These themes are well-suited to NROC's and to the OCEH Committee's construct and strategy to enhance communication and collaboration, advocate for collectively-determined priority regional actions, and help articulate a common vision for management and restoration. To implement this strategy, NROC has identified three areas of focus within coastal and ocean ecosystem health:

- Link observations to management decision-making,
- Enhance data collection, integration and dissemination, and
- Improve governance, coordination and communication.

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Strategies: The committee has identified two strategies for working toward its goal of protecting and restoring coastal and ocean ecosystems in the Northeast:

1. Support research and monitoring that enhances our understanding of ecosystem structure and function, improves utility of social, economic and environmental indicators, and leads to effective EBM implementation
2. Strengthen regional coordination to promote efficiency and collaboration by building partnerships, sharing resources, and reducing redundancy of efforts and ensuring full public and professional participation in the decision-making process

During the 2013-2014 timeframe the OCEH Committee will be developing comprehensive plans within these two strategies to guide funding and activities that will most effectively meet the goal of a healthy and sustainable regional ecosystem. Activities listed below are underway or in the development phase and will begin the process of implementing the strategies. While far from complete with respect to the goal of implementing an EBM framework throughout the region, many of these actions provide a start, or even a cornerstone towards achieving that goal.

Strategies and activities: Each of the strategies and activities have specific associated steps that the committee members and their partners will implement over the next two years.

Strategy OCEH-1: Support Research and Monitoring

Activities:

OCEH - 1.1 Initiate the development of a regional climate change sentinel monitoring strategy

NROC will work closely with NERACOOS to promote the development of an integrated regional climate change sentinel monitoring strategy for the Northeast region (from the Canadian Maritimes to Long Island Sound) that includes standard data collection of water column and benthic properties. The goal is to quantify regional changes in the environment brought about by climate change. The approach is to build on the existing Long Island Sound sentinel monitoring project, scaling it to the regional level.

1.1.1 Form a project steering committee

Regional experts will be invited to serve on a project steering committee. The steering committee will provide input and guidance throughout the project.

1.1.2 Conduct a rapid assessment/inventory of current climate change sentinel monitoring programs

Current lists of regional monitoring programs will be sought and gathered. Additional research and efforts will be made to add to and update those lists. This may include attending relevant meetings and conferences, such as the IOOS Summit, to learn about other regional efforts. A short document will be produced with compiled results.

1.1.3 Collect lessons learned from LIS monitoring project and other climate change sentinel sites

Regional climate change sentinel site and monitoring projects, including LIS, will be contacted to get information on what worked and didn't work in establishing their strategy. The LIS project manager is planning a webinar for Fall 2012 to review progress on the project and help initiate discussions about a regional network. A short document will be produced with compiled results.

1.1.4 Draft a funding proposal to develop a strategy

The steering committee will utilize the NERACOOS Sentinel Monitoring White Paper and other information generated by 1.1.2 and 1.1.3 to write a proposal that can be used by partner organizations to secure grant funding to develop the strategy.

1.1.5 Convene a workshop on sentinel site monitoring

1.1.6 Develop a workshop report

OCEH-1.2: Participate in seafloor habitat characterizations and classification
Coordinate with NROC Ocean Planning Committee to conduct a comprehensive assessment of the various characterization and classification efforts underway, produce a summary of state coastal policies and management needs which would be advanced by improved marine habitat characterization and classification, and develop a regional action plan to identify synergies and opportunities to unify mapping, characterization, and classification approaches in terms of methodologies, structure, data requirements, and coordination and leveraging data acquisition. This project has received NOAA CZM funding as a Project of Special Merit.

1.2.1 Create a working group

Establish an NROC working group to act as regional forum to establish common understanding of the various efforts underway (and their objectives, functions, and status); seek consensus on a unified classification framework for the region; and address disparate levels of data availability, resolution, and types throughout the region.

1.2.2 Review and compare habitat classification models

Review approaches underway across the region to better inform managers and scientists of the details of specific classification efforts underway, incorporating consideration of models' data requirements as a component of this review. Prepare a written review and comparison of marine habitat classification models.

1.2.3 Assess management objectives and need

Identify state policy and management objectives which could be achieved or assisted through application of marine habitat classification. Prepare a written summary of New England states' coastal and marine habitat management and policy needs and priorities.

1.2.4 Convene a seafloor mapping workshop

The purpose of this workshop is to coordinate regional bathymetric data collection. This was identified as a priority need for the region during the Northeast LiDAR and Sea Level Rise Impacts Workshop in July 2012. NROC will facilitate the development of regional seafloor mapping priorities and leverage existing mapping activities in partnership with the Gulf of Maine Council and the NROC Ocean Planning Committee by discussing the results of the review conducted in Task 1.2.2, through a prism of management and policy objectives, to identify commonalities, synergies, and opportunities to work toward uniformity in practice in New England. The workshop proceedings will be published and made available.

1.2.5 Create an action plan

Develop specific action items, further investigations, and opportunities for further coordination between marine habitat classification approaches. Prepare an action plan and agreement on steps for pursuing a regionally comprehensive marine habitat classification approach in New England.

Strategy OCEH-2: Strengthen Regional Coordination

Activities:

OCEH-2.1 Support the marsh migration pilot project

A marsh migration project established as part of the larger New England Governors' Coastal Conservation Strategy has developed into a pilot project for the states of Maine, Massachusetts and New Hampshire. In addition, Rhode Island has received NOAA climate change funding to work on marsh migration using the SLAMM model to evaluate RI coastal marshes. NROC will provide support to various aspects of the existing projects.

2.1.1 Assist with project report

Support will be provided as needed during the development of the project reports. This may also include dissemination and outreach of the final product to appropriate state land conservation groups.

2.1.2 Explore next steps

Consideration and initial exploration of relevant follow-up projects will be conducted. This may include conducting similar projects at other locations in the region using tools currently under development.

OCEH-2.2: Promote communication and coordination between ecosystem indicator programs

NROC will continue to promote communication and coordination among ecosystem indicator programs. Key metrics and indicators will be identified and tracked to measure coastal and ocean ecosystem health and climate change. For example, several NROC partner organizations established the Community of Practice web site because of a recommendation from the March 2011 indicators workshop convened by COMPASS and MOP.

2.2.1 ***Reassess utility and value of Community of Practice web site***

Conduct survey of March 2011 indicators workshop participants to ask them: (1) if they know about the web site, (2) if they've used the web site, (3) if those who have used if have found it useful, and (4) if they have better idea(s) for how to share information and communicate among the community.

2.2.2 Consider alternative communication and coordination mechanisms
Depending on outcome of 3.1, revisit March 2011 workshop recommendations to determine whether to continue Community of Practice web site or try another communications vehicle.

2.2.3 Provide funding to organization to actively promote and maintain the Community of Practice web site

2.2.4 Update compendium of ecosystem indicator programs in New England region

OCEH-2.3: Develop an environmental events database
Throughout the northeast, various environmental "events" occur that may be recorded by individual groups or state programs but not widely shared. These events include eelgrass declines, fish kills, HAB outbreaks, sudden vegetation dieback, shellfish diseases, and algal blooms. Sometimes these events occur simultaneously in multiple states, but absent a regional database to record these events, managers never connect the dots or learn too late about an event that could otherwise be surveyed and studied. Building on other indicator and database work, develop recommendations for development of an online regional database to track environmental events. Consider including environmental and public health events they often intermingle (ex: mosquito borne disease outbreaks mean more spraying which means more chemicals in water impacting species including humans).

2.3.1 Create steering committee recommendations
Convene a small core group of regional experts in environmental events (should include members outside of the OCEH committee) that can address the tasks in 2.3.2 and prepare a report regarding the development of a database. This committee will identify other individuals in the region to review and comment on the draft report.

2.3.2 Define vision, goal and scope of database and what types of events/indicators could be tracked
Tasks that would help team accomplish this include the following:

- Identify available databases that track environmental events (e.g., HAB, sentinel monitoring, ESIP, Florida Fish Kill database).
- Review the databases and other materials such as reports about environmental events, the Sentinel Monitoring Strategy and Data Citation Clearinghouse, findings from the 2011 ecosystem indicator workshop and associated COP website, etc. to identify appropriate content for a regional database.
- Make recommendations regarding fields and possible spatial (GIS) aspect for the database.
- Identify the primary versus secondary audience and consider utility as well as current and future management needs/implications.
- Identify the likelihood that this database could be created as a module to an existing database which would thus capitalize on existing online services and scripts to support database functionality.

2.3.3 Recommendation report
Develop a report with recommendations for the content of the database, describe how managers and scientists would or could use the data, identify if there is an existing

database that could support an environmental events module (i.e., not start from scratch) and identify possible mechanisms and funding sources for implementation.

Resources: The following table shows which activities can be undertaken with existing resources, and which require additional resources.

With Existing Resources	With Additional Resources
OCEH 1.1 Regional sentinel monitoring strategy	
OCEH-1.1.1 Form a project steering committee	OCEH-1.1.5 Convene a workshop on sentinel site monitoring
OCEH-1.1.2 Conduct a rapid assessment/inventory of current climate change sentinel monitoring programs	OCEH-1.1.6 Develop a workshop report
OCEH-1.1.3 Collect lessons learned from LIS monitoring project and other climate change sentinel site	
OCEH-1.1.4 Draft a funding proposal to develop a strategy	
OCEH 1.2 Participate in seafloor mapping characterizations	
OCEH-1.2.1 Create a working group	
OCEH-1.2.2 Review and compare habitat classification models	
OCEH-1.2.3 Assess management objectives and need	
OCEH-1.2.4 Convene a seafloor mapping workshop	
OCEH-1.2.5 Create an action plan	
OCEH 2.1 Support the marsh migration pilot project	
OCEH-2.1.1 Assist with project report	
OCEH-2.1.2 Explore next steps	
OCEH 2.2 Promote communication and coordination between ecosystem indicator programs	
OCEH-2.2.1 Reassess utility and value of Community of Practice web site	OCEH-2.2.3 Provide funding to organization to actively promote and maintain the Community of Practice web site
OCEH-2.2.2 Consider alternative communication and coordination mechanisms	OCEH-2.2.4 Update compendium of ecosystem indicator programs in New England region
OCEH-2.3: Develop an environmental events database	
	2.3.1 Create steering committee recommendations
	2.3.2 Define vision, goal and scope of database and what types of events/indicators could be tracked

	2.3.3 Recommendation report

Implementation Leads: The following table shows the lead agency responsible for implementing each activity. While all committee member agencies are encouraged to participate in the implementation of activities, the lead agency is responsible for coordinating, monitoring, and reporting on designated activities.

Activities	Lead Organization
OCEH 1.1 Regional sentinel monitoring strategy	EPA/GMRI
OCEH-1.1.1: Form a project steering committee	
OCEH-1.1.2: Conduct a rapid assessment/inventory of current climate change sentinel monitoring programs	
OCEH-1.1.3: Collect lessons learned from LIS monitoring project and other climate change sentinel sites	
OCEH-1.1.4: Draft a funding proposal to develop a strategy	
OCEH-1.1.5: Convene a workshop on sentinel site monitoring	
OCEH-1.1.6 Develop a workshop report	
OCEH-1.2: Participate in seafloor mapping characterizations	NROC
OCEH-1.2.1 Create a working group	
OCEH-1.2.2 Review and compare habitat classification models	
OCEH-1.2.3 Assess management objectives and need	
OCEH-1.2.4 Convene a seafloor mapping workshop	
OCEH-1.2.5 Create an action plan	
OCEH-2.1: Support the marsh migration pilot project	EPA
OCEH-2.1.1: Assist with project report	
OCEH-2.1.2: Explore next steps	
OCEH-2.2: Promote communication and coordination between ecosystem indicator programs	EPA
OCEH-2.2.1: Reassess utility and value of Community of Practice web site	
OCEH-2.2.2: Consider alternative communication and coordination mechanisms	
OCEH-2.2.3: Provide funding to organization to actively promote and maintain the Community of Practice web site	
OCEH-2.2.4: Update compendium of ecosystem indicator programs in New England region	
OCEH-2.3: Develop an environmental events database	CT DEEP
OCEH-2.3.1 Create steering committee recommendations	
OCEH-2.3.2 Define vision, goal and scope of database and what types of events/indicators could be tracked	
OCEH-2.3.3 Recommendation report	

Past Accomplishments: Below is a summary of accomplishments of the Ocean and Coastal Ecosystem Health Committee and its many partners during 2010-2012. The order of accomplishments is based on the 2010-2012 work plan.

- **Developed a regional ocean data portal and network for regional coastal and marine**

spatial data (June 2011) A work group comprising representatives of Sea Plan, NROC, NERACOOS, NOAA, NOAA, and ASA developed the portal, which is a decision support and information system for managers, planners, scientists and project proponents involved in ocean planning in the northeast region.

- **Convened a regional Ecosystem Health Indicators Conference (March 30-31, 2011)** The Communication Partnership for Science and the Sea (COMPASS) and the Massachusetts Ocean Partnership (now Sea Plan) hosted the 2011 Ecosystem Health Indicators Conference in Boston, MA. More than 50 representatives from northeastern regional monitoring, indicator, and resource management programs met to network and share scientific and communication "best practices" for environmental indicators.
- **Submitted successful funding proposal for a coastal climate change land conservation demonstration project (2011)** NROC state agencies worked with NEGC's Commission on Land Conservation to develop and submit a proposal to NOAA that was selected for funding. The Safeguarding Coastal and Estuarine Land pilot project that builds on state and regional land conversation, climate, and wildlife plans to address joint goals for land conversation, climate change adaptation, and habitat protection.
- **Convened an Estuarine Nutrient Criteria Regional Technical Advisory Group meeting (June 2011)** EPA hosted a regional estuarine nutrient criteria workshop that brought together RTAG members from other federal agencies, the five New England coastal states, NEIWPCC, and the six National Estuary Programs to share information on the science behind the states' respective efforts to develop numeric nutrient criteria.
- **Supported the Sudbury Group** (technical arm of New England Regional Dredging Team) The Sudbury Group met five times during 2011-2012 and continued to make progress working with the states to improve the scientific basis for the imposition of "time-of-year" restrictions on dredging and other coastal development projects. The Massachusetts Division of Marine Fisheries completed a multi-year project to update its TOY recommendations for all estuarine and coastal waters, and is serving as a model for the other New England states.
- **Merged NROC and NERACOOS Ocean and Coastal Ecosystem Health Committees (July 2012)** NROC and NERACOOS initiated joint priority setting and annual work planning to improve coordination and efficiency among the various agencies and organizations participating on these two committees.

2013-2014 Committee Members:
Brian Thompson, CT, Long Island Sound Program (State Co-chair)
Mel Coté, US EPA Region 1 (Federal Co-chair)
Regina Lyons, US EPA Region 1 (Alternate Federal Co-chair)